Digital data encoding device and method thereof

The digital data encoding method includes steps of converting digital data of a first and a second sounds respectively into the data on a frequency axis in accordance with each block, so as to generate coefficient data of the first and the second audio channels; testing whether the symbol of the first-channel coefficient data is consistent with the symbol of the second-channel coefficient data according to each of the frequencies; inverting any one of symbol of first audio channel coefficient data and the second audio channel coefficient data when both are not consistent, so as to calculate the average value of the first and the second audio channel coefficient data whose symbols are identically processed and generate common audio channel data; dividing the common audio channel data into a plurality of frequency bands, wherein each of the frequency bands contains one or a plurality of common audio channel data; and performing a floating decimal point conversion for the divided common audio channel data in accordance with each of the frequency bands to convert into data of one exponential part data common to all frequency bands and data of a plurality of fixed-point part.